

Concluded
B1

up only one layer of metalization between two layers of dielectric material, or they can be stacked in two or more layers (i.e., layers 140, 150, 160, 170 of Fig. 2a), depending upon the number of lines being utilized.--

Please replace the paragraph beginning at page 13 line 17 with the following rewritten paragraph

B2

--Referring to Figs. 12 - 17, typical electrical performance characteristics of the embodiment shown in Figs. 3 - 11 and described above are shown for a frequency range of 1.0 GHz to 3.0 GHz. For the purposes of the performance curves, four ports (P1, P2, P3, P4) are located as follows: P1 is at contact pad 901; P2 is at contact pad 902; P3 is at contact pad 903; and P4 is at contact pad 904. Fig. 12 shows the return loss, in decibels, for P1, P2, P3, and P4. Fig. 13 shows the amplitude balance, or difference between the signal from P2 to P1 and the signal from P4 to P1, in decibels. Fig. 14 shows the phase balance, or phase difference between the signal from P2 to P1 and the signal from P4 to P1, in degrees. Fig. 15 shows the outer transmission, in decibels, between P4 and P1 and between P2 and P1. Fig. 16 shows the inner transmission, in decibels, between P2 and P3 and between P4 and P3. Fig. 17 shows the isolation, in decibels, between P4 and P2 and between P3 and P1.--

Please replace the four paragraphs beginning at page 15, line 20 and ending at page 16 line 13 with:

B3

-- In one implementation (not shown separately), the panel 2300 is approximately 0.025 inches thick and has a dielectric constant of approximately 10.2.

A second example panel is panel 2302, which is approximately 0.025 inches thick and has a dielectric constant of approximately 10.2. Holes 2320 having diameters of approximately 0.005 inches to 0.020 inches, but preferably having diameters of 0.008 inches, are drilled in the pattern shown in Fig. 24. Preferably, alignment holes 2310 and holes 2320 are drilled into panel 2302 before it is dismounted.

A third example panel is panel 2303, which is approximately 0.005 inches thick and has a dielectric constant of approximately 3.0. Holes 2330 having diameters of approximately 0.005 inches to 0.020 inches, but preferably having diameters of 0.008 inches, are drilled in the pattern shown in Fig. 25. Preferably, alignment holes 2310 and holes 2330 are drilled into panel 2303 before it is dismounted.

A fourth example panel is panel 2304 (not shown separately), which is approximately 0.005 inches thick and has a dielectric constant of approximately 3.0. --

Replace the paragraph beginning at page 18, line 23 with:

B4

--With the assistance of targets 2326 and alignment holes 2310, panels 2304, 2303, 2302, 2300 are stacked top to bottom, aligned and fusion bonded into

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assembly 2800, in a preferred embodiment, at a pressure of 200 PSI, with a 40 minute ramp from room temperature to 240 degrees C, a 45 minute ramp to 375 degrees C, a 15 minutes dwell at 375 degrees C, and a 90 minute ramp to 35 -- degrees C.

Replacement Paragraphs in Marked-Up Form

Please replace the paragraph beginning at page 5 line 27 with the following rewritten paragraph

--The present invention relates to the manufacture of spiral-like couplers using PTFE as a base material. Coupling lines are wound in spiral-like shapes, which can be rectangular, oval, circular, or other shape that provides a compact structure in nature. Couplers can consist of two, three, or more coupling lines, depending on the application and desired coupling. Coupling lines can be co-planar, taking up only one layer of metalization between two layers of dielectric material, or they can be stacked in two or more layers (i.e., layers 140, 150, 160, 170 of Fig. 2a), depending upon the number of lines being utilized.--

Please replace the paragraph beginning at page 13 line 17 with the following rewritten paragraph

--Referring to Figs. 12 - 17, typical electrical performance characteristics of the embodiment shown in Figs. 3 - 11 and described above are shown for a frequency range of 1.0 GHz to 3.0 GHz. For the purposes of the performance curves, four ports (P1, P2, P3, P4) are located as follows: ~~the ports are as follows:~~ P1 is at contact pad 901; P2 is at contact pad 902; P3 is at contact pad 903; and P4 is at contact pad 904. Fig. 12 shows the return loss, in decibels, for P1, P2, P3, and P4. Fig. 13 shows the amplitude balance, or difference between the signal from P2 to P1 and the signal from P4 to P1, in decibels. Fig. 14 shows the phase balance, or phase difference between the signal from P2 to P1 and the signal from P4 to P1, in degrees. Fig. 15 shows the outer transmission, in decibels, between P4 and P1 and between P2 and P1. Fig. 16 shows the inner transmission, in decibels, between P2 and P3 and between P4 and P3. Fig. 17 shows the isolation, in decibels, between P4 and P2 and between P3 and P1.--

Please replace the four paragraphs beginning at page 15, line 20 and ending at page 16 line 13 with:

-- ~~An example of~~ In one implementation (not shown separately), the panel 2300 is ~~panel 2301 (not shown separately), which is~~ approximately 0.025 inches thick and has a dielectric constant of approximately 10.2.

A second example ~~of panel 2300~~ is panel 2302, which is approximately 0.025 inches thick and has a dielectric constant of approximately 10.2. Holes 2320 having diameters of approximately 0.005 inches to 0.020 inches, but

preferably having diameters of 0.008 inches, are drilled in the pattern shown in Fig. 24. Preferably, alignment holes 2310 and holes 2320 are drilled into panel 2302 before it is dismounted.

A third example ~~of panel 2300~~ is panel 2303, which is approximately 0.005 inches thick and has a dielectric constant of approximately 3.0. Holes 2330 having diameters of approximately 0.005 inches to 0.020 inches, but preferably having diameters of 0.008 inches, are drilled in the pattern shown in Fig. 25. Preferably, alignment holes 2310 and holes 2330 are drilled into panel 2303 before it is dismounted.

A fourth example ~~of panel 2300~~ is panel 2304 (not shown separately), which is approximately 0.005 inches thick and has a dielectric constant of approximately 3.0. --

Replace the paragraph beginning at page 18, line 23 with:

--With the assistance of targets 2326 and alignment holes 2310, panels 2304, 2303, 2302, ~~2304-2300~~ are stacked top to bottom, aligned and fusion bonded into assembly 2800, in a preferred embodiment, at a pressure of 200 PSI, with a 40 minute ramp from room temperature to 240 degrees C, a 45 minute ramp to 375 degrees C, a 15 minutes dwell at 375 degrees C, and a 90 minute ramp to 35 -- degrees C.

In the Drawings

Replacement drawing sheets 1 and 11-16 (showing Figs. 1, 2a, 2b, 12-17) have been provided. A second sheet set of drawing sheets 1 and 11-16 are also included with changed portions of the drawings indicated in red ink.